



*Better Buildings Residential Network
Peer Exchange Call Series*

*Training, New Technology, and Workforce Recruitment
and Retention Challenges*

May 12, 2022

Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers
 - **Alison Moe**, National Renewable Energy Laboratory (NREL)
 - **John Shipman**, Franklin Energy
 - **Patch Garcia**, Eco Performance Builders
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

1. **Sales of services and commercial messages are not appropriate** during Peer Exchange Calls.
2. Calls are a safe place for discussion; **please do not attribute information to individuals** on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.

Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media, social media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

Commitment:

- Members only need to provide *one number*: their organization's number of residential energy upgrades per year, or equivalent.

Upcoming Calls (2nd & 4th Thursdays):

- *5/26: The Impact of Insurance and Mortgages on Energy Efficiency – Resilience, New Markets, and More*
- *6/09: The State of Home Labeling and Residential Energy Efficiency*
- *6/23: Coming Soon: Innovations Heading to the Residential Efficiency Market from the DOE Advanced Building Construction Initiative*

Peer Exchange Call summaries are posted on the Better Buildings [website](#) a few weeks after the call

For more information or to join, for no cost, email bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join



Alison Moe
National Renewable Energy Laboratory (NREL)



Better Buildings Residential Network: Training, New Technology, and Workforce Recruitment and Retention

Allison Moe
May 12, 2022

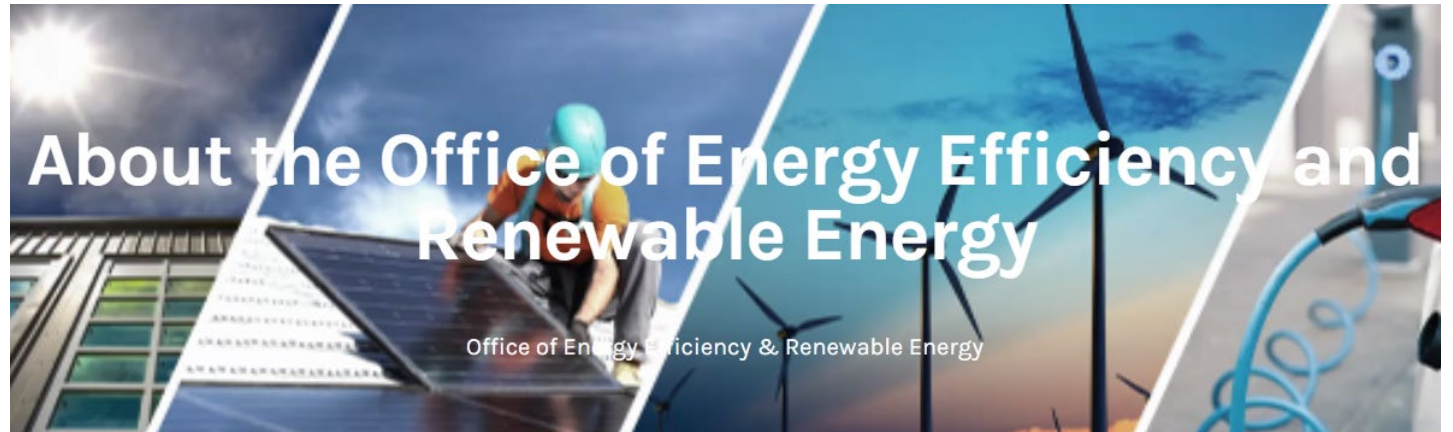
Office of Energy Efficiency & Renewable Energy Workforce

Clean Energy Workforce Vision:

*The United States has a **nationally-representative** workforce of **sufficient size, skill, and compensation** to carry out an equitable transition of America's energy infrastructure to achieve net-zero greenhouse gas emissions no later than 2050.*

Goal of Efforts:

*To support this vision, EERE will work to **increase awareness** of the clean energy workforce, support **strong skills development** among those that make clean energy deployment possible, **streamline pathways** for new people to enter the clean energy workforce, and support action that increases growth and stability of clean energy sectors.*



[Office of Energy Efficiency & Renewable Energy](#) » [About the Office of Energy Efficiency and Renewable Energy](#)

EERE's mission is to accelerate the research, development, demonstration, and deployment of technologies and solutions to equitably transition America to net-zero greenhouse gas emissions economy-wide by no later than 2050, and ensure the clean energy economy benefits all Americans, creating good paying jobs for the American people—especially workers and communities impacted by the energy transition and those historically underserved by the energy system and overburdened by pollution.

Going from Technology Development to Deployment?



Who is the Green Buildings Workforce?



2.3+ Million Workers in Across These Industries in Efficiency Alone

Better Buildings Workforce Accelerator



SEARCH SOLUTIONS



SOLUTIONS ▾

PROGRAMS & PARTNERS ▾

EVENTS & WEBINARS ▾

LEARN MORE ▾

BUILDINGS CHALLENGE ▾

CLIMATE CHALLENGE

BETTER PLANTS ▾

ALLIANCE ▾

ACCELERATORS ▾

ISO 50001 ▾

OTHER INITIATIVES ▾

WORKFORCE ACCELERATOR

U.S. DOE has partnered with 40+ national stakeholders in setting and meeting goals to –

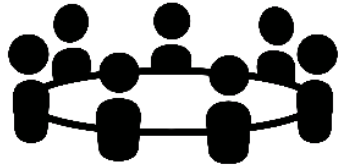
- **Increase interest and awareness** of building energy efficiency careers nationwide
- Simplify and **streamline pathways** from education training, and apprenticeship to careers
- Augment existing education, training, and apprenticeship programs to fill knowledge gaps and **improve skill competencies**

Each Partner Agrees To:

- ✓ Work with DOE to establish a SMART goal aligned with their organization's activities and the Accelerator's mission
- ✓ Participate in quarterly partner meetings and technical assistance workshops
- ✓ Collaborate by sharing best practices and lessons learned with other accelerator partners
- ✓ Share updates on their progress toward their SMART goal

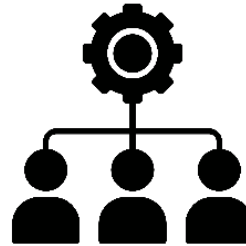
Better Buildings Workforce Accelerator Activities

Quarterly Calls to Share Updates on Progress



- » 90-minute meetings with internal and external presenters and breakout groups

Workshops & Technical Assistance



- » Deep dive virtual meetings on specific topics with subject matter experts
- » Technical Assistance (up to 100 hours)

Amplification Of Progress & Success Stories



- » Better Buildings blog posts, social media, speaking opportunities, videos, etc.

Beyond the Better Buildings Workforce Accelerator

BBWA Resources

<https://betterbuildingsolutioncenter.energy.gov/accelerators/workforce>

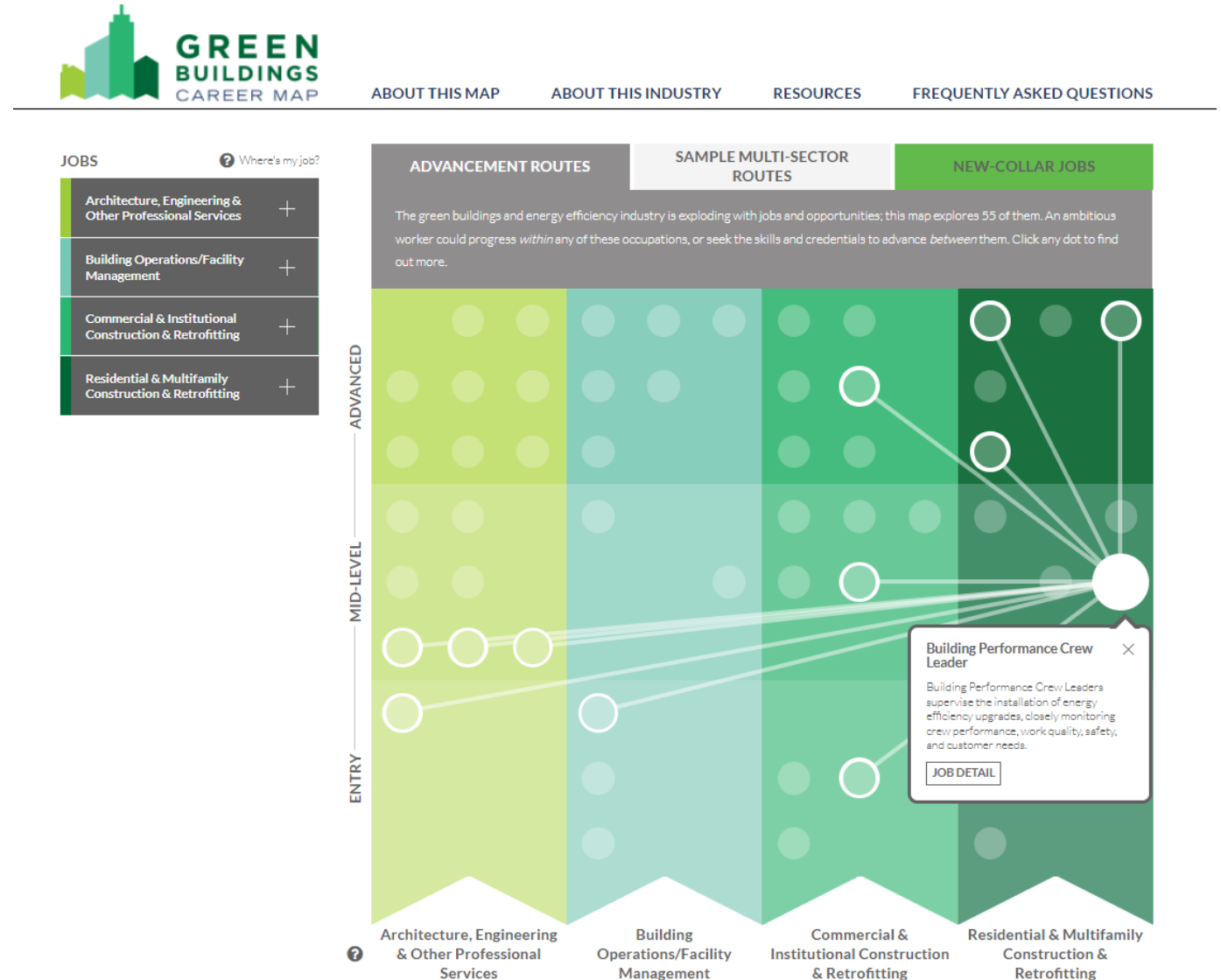
- K-12 Engagement Fact Sheet
- Diversity, Equity and Inclusion Fact Sheet (coming soon)
- BBWA Partners and their TA Projects (coming soon)

Better Buildings Workforce Development Portal

<https://betterbuildingsolutioncenter.energy.gov/workforce>

Green Buildings Career Map

<https://greenbuildingscareemap.org/>



Putting On my Weatherization Hat ...

Strategies for developing a workforce pipeline

- Connect and engage with local high schools, community colleges and vocational schools
 - More than 800,000 students enrolled in construction and architecture Career and Technical Education (CTE) courses
 - Connect and collaborate with instructors
 - Offer job shadowing or internship opportunities for students
- To find construction CTE programs in your area, contact your state CTE agency: <https://careertech.org/statedirectors>

Putting On my Weatherization Hat ...

Strategies for developing a workforce pipeline

- Consider registered apprenticeship, youth apprenticeship or pre-apprenticeship programs
 - Contact your state apprenticeship contact:
<https://www.apprenticeship.gov/about-us/apprenticeship-system>
- Connect with other local organizations
- Be thoughtful about the job descriptions you post, and how they may be connecting to or alienating people

Putting On my Weatherization Hat ...

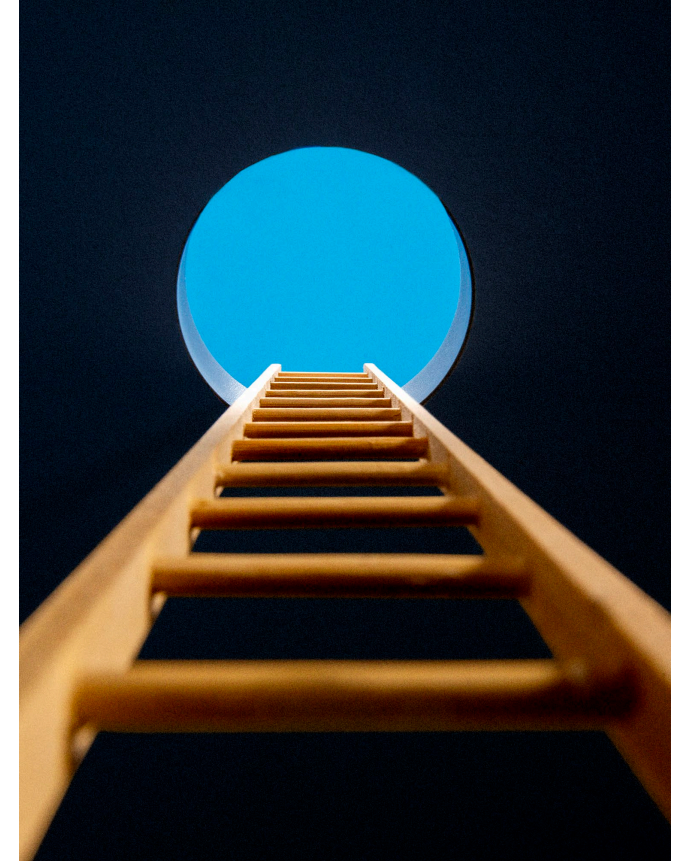
Strategies for retaining your staff

- National survey of workers on residential construction sites:
 - 51% planning to stay in job
 - 14% disengaged but not ready to leave
 - 25% thinking of leaving.
- Those most likely to be thinking of leaving have 1-5 years of experience.
- Top reason for workers wanting to leave: Lack of career advancement, training, and professional development opportunities

Putting On my Weatherization Hat ...

Strategies for retaining your staff

- Wages, benefits or other financial incentives
- Clear career expectations and pathways
- Professional development opportunities
- Company culture/Building a safe, supportive and inclusive workplace environment



Putting On my Weatherization Hat ...

Strategies for retaining your staff

- Comprehensive and consistent onboarding
- Mentorship programs
- Succession planning
- Tracking your turnover – exit interviews.



Thank you!

Allison Moe Allison.moe@nrel.gov



John Shipman
Franklin Energy



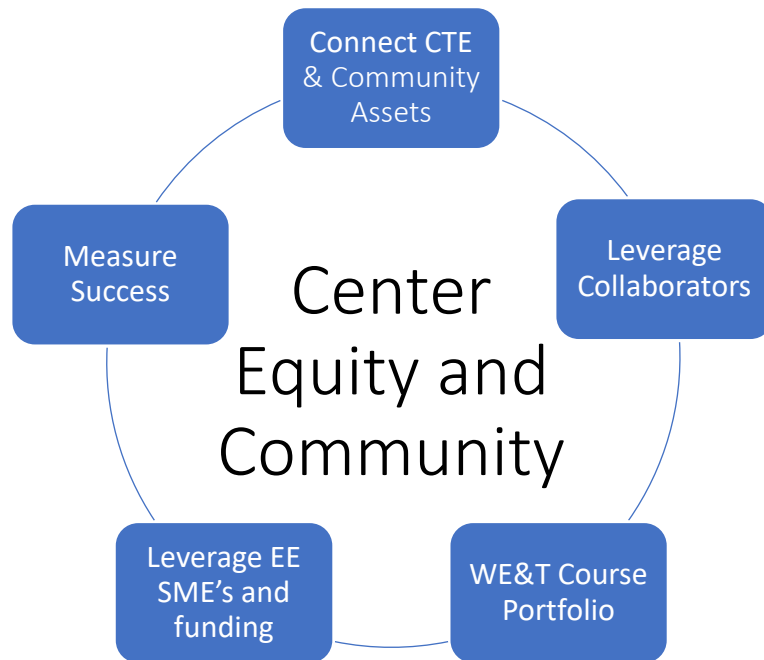
Training, New Technology, and Workforce Recruitment and Retention Challenges

May 12, 2022

Presented by: John Shipman

Workforce, Education, & Training Approach

- Meet participants where they are
- Multiple prescriptive pathways
- Follow participant success
- Leverage the fungibility of learning



The **Franklin Energy** Workforce Approach



COMMUNITY COLLABORATION

Engage key community stakeholders, secondary and post-secondary schools, community-based organizations (CBO), faith-based organizations (FBO) and workforce investment boards (WIB) to identify candidates for training and leverage resources



CAPACITY BUILDING

Engage diverse business enterprise (DBE) energy efficiency trade professionals and trade allies to immediately address reductions in the region's skilled workforce through an unbiased and equitable process



TRAIN-THE-TRAINER PROGRAMS

Provide sessions to high school teachers and community college instructors to support launch of a High School, Adult School and Community College Energy Efficiency Certification Program



FILL THE PIPELINE

Train individuals from disadvantaged and traditionally neglected community high schools and community colleges for high-wage careers as part of a skilled BPI-certified Building Performance Institute workforce Development program

FRANKLIN'S PATHWAY

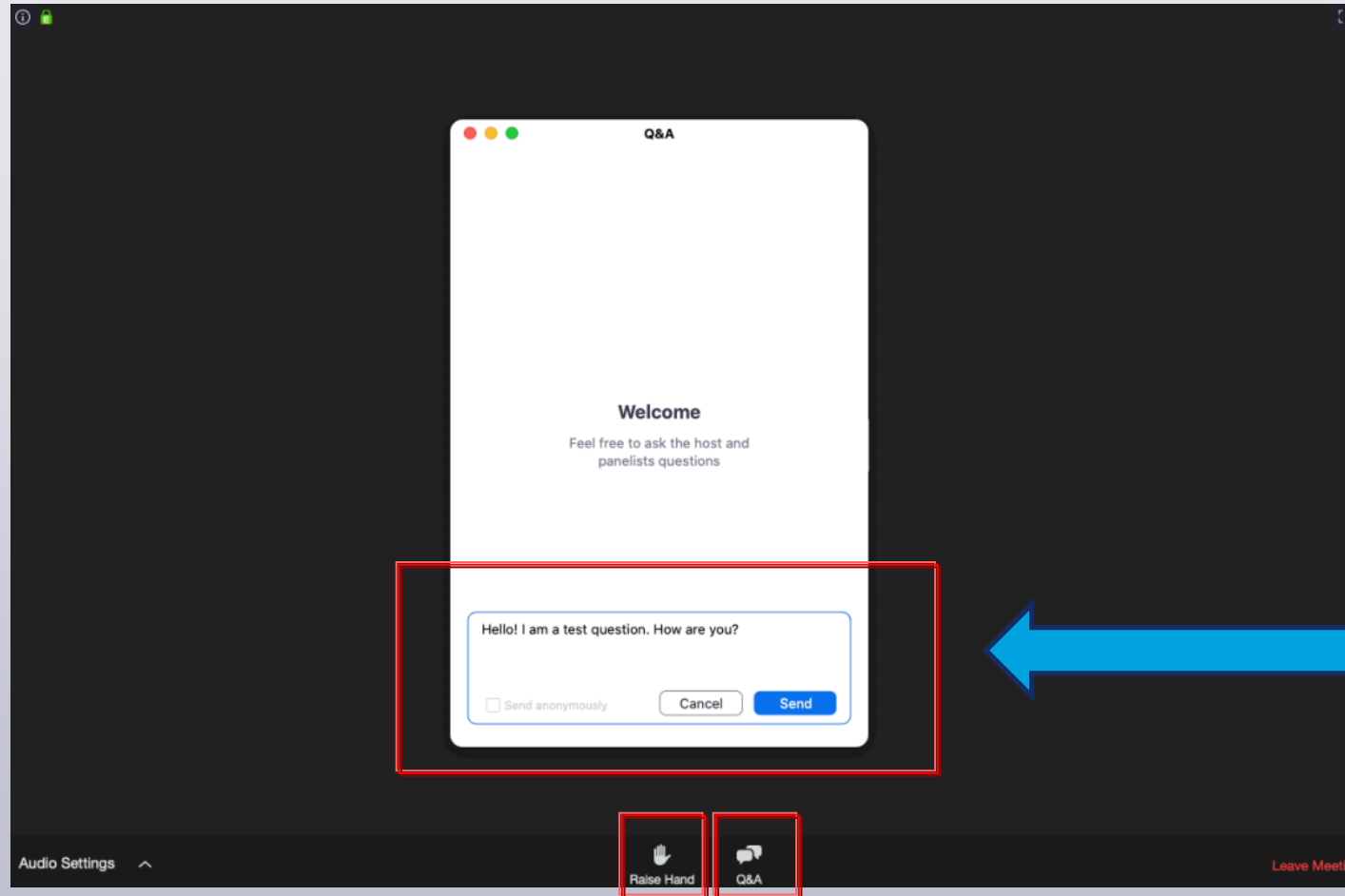
- Community collaboration:** Engage key community stakeholders, secondary and post-secondary schools, community-based organizations (CBO), faith-based organizations (FBO) and workforce investment boards (WIB) to identify candidates for training and leverage resources
- Capacity building:** Engage diverse business enterprise (DBE) energy efficiency trade professionals and trade allies to immediately address reductions in the region's skilled workforce through an unbiased and equitable process
- Train-the-Trainer programs:** Provide sessions to high school teachers and community college instructors to support launch of a High School, Adult School and Community College Energy Efficiency Certification Program
- Fill the Pipeline with a Capable Workforce:** Train individuals from disadvantaged and traditionally neglected community high schools and community colleges for high-wage careers as part of a skilled BPI-certified (Building Performance Institute) workforce Development program

Diversity, Inclusion, Equity & Belonging

- DEI&B OKR's cascaded across organization - internal
- Emphasis on diverse recruiting via community-based partnerships (internal/external)
- Retention and Workforce Development focus via mentoring and training (internal)
- Strong, intentional supplier diversity commitment (internal/external)
 - Default Diverse initiative
 - Preferred Partnership Status
 - Supplier Development budget and activities
- Strong DEI&I Messaging and Communications (internal and external)
 - Nation-wide Listening Sessions
 - National DEI&B Roundtable and committees
 - Black Employee Resource Group
 - Monthly Cultural Inclusion events
 - Social Media presence
 - Impact Café Series (including many diverse professionals)



Discussion: Share Your Questions



Please use the **questions box** to submit questions, comments, or alert us of technical difficulties

Raise your hand to enter the discussion

Open and close your **Q&A window** here



Patch Garcia
Eco Performance Builders

Building a Residential Energy Efficiency Workforce



Mrs. Patch Garcia, Dir of PeepOps @ Eco Performance Builders,
Concord, CA , Jobs@EPBuilders.com (925) 771.9101 text line

When we say “residential energy efficiency”
folks imagine this...



Yet, how we go about it looks like this



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And this..... Because air sealing and insulation are the prerequisite to **every residential electrification project** in the U.S.,



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(Attic.) BEFORE. What folks are actually breathing

- ▶ When windows are closed, most people are breathing mouse feces, dust, mold, and even asbestos.





Why study workers?

- ▶ If our country must switch to high efficiency electric heat pumps, then we must hire correctly.
- ▶ EVERY worker must fit into an 18" crawl space

When was the last HUGE national labor shortage?





Create an inclusive work culture

Think small and mighty.



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Who does well? Fit folks who enjoy physical work as daily exercise.

What else is important to doing this job well?



What's most important in a trainee & employee?

- ▶ #1. Physical size & abilities. Each worker must be able to fit inside an 18" crawl space.
- ▶ #2. Willingness to get very dirty: spiders, bugs, mouse feces, dust
- ▶ #3. Mechanical aptitude
- ▶ #4. Strong desire to learn the trades
- ▶ #5. Leadership abilities
- ▶ #6. A history of hard work OR demonstration that they can do it. (Can they do push ups?)



Create a career ladder

- ▶ Purchase a training program like the one sold by the Building Performance Institute (www.bpi.org) and train it.
- ▶ Give raises as folks move up the ladder
- ▶ De-genderize roles & job postings

In-House Training



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Training- Every Other Thursday



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How to retain talent

- ▶ Offer training
- ▶ Year one, give a performance review and raise every 90 days.
- ▶ Create a Culture of Appreciation.
- ▶ Expect extremely high turnover unless you can pay top dollar.



Who Does Well in These Roles?

- Naturally technical (enjoy reading manuals, loves working w/hands.)
- **SMALL, STRONG** people who easily fit into an 18" crawl space & work w/tools.
- Folks who already fix things
- **FAST!** We work at a faster-than-average pace.
- Eager to learn.



Who does well? Nerds!

Quiet, typically introverted folks who like to fix things, are mechanically inclined and enjoy reading instruction manuals.



Thanks to infographicjournal.com/geek-vs-nerd for the image use.

Funding is coming!

- ▶ EE funding should be spent only on folks who **FIT into an 18" crawlspace**
- ▶ Train in-house
- ▶ Track metrics, retention & growth over time.



Call us about High Performance Heat Pump Training



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Eco Performance Builders

Mrs. Patch Garcia,
Director of People Operations
Patch@epbuilders.com

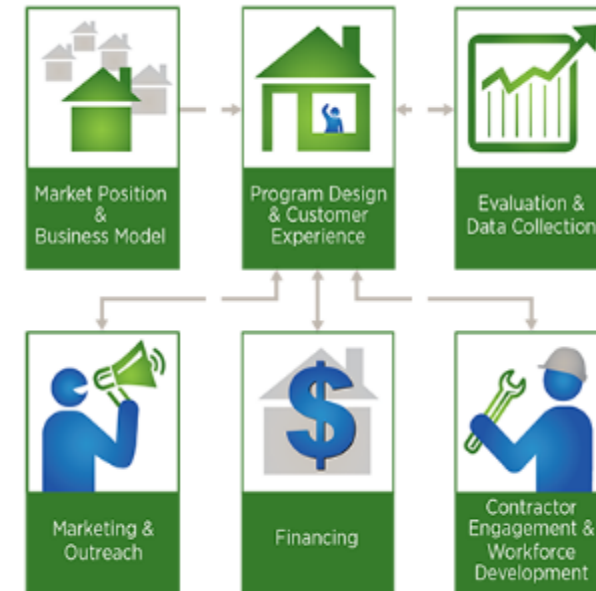


TEXT me at
(925) 771.9101

Explore the Residential Program Solution Center

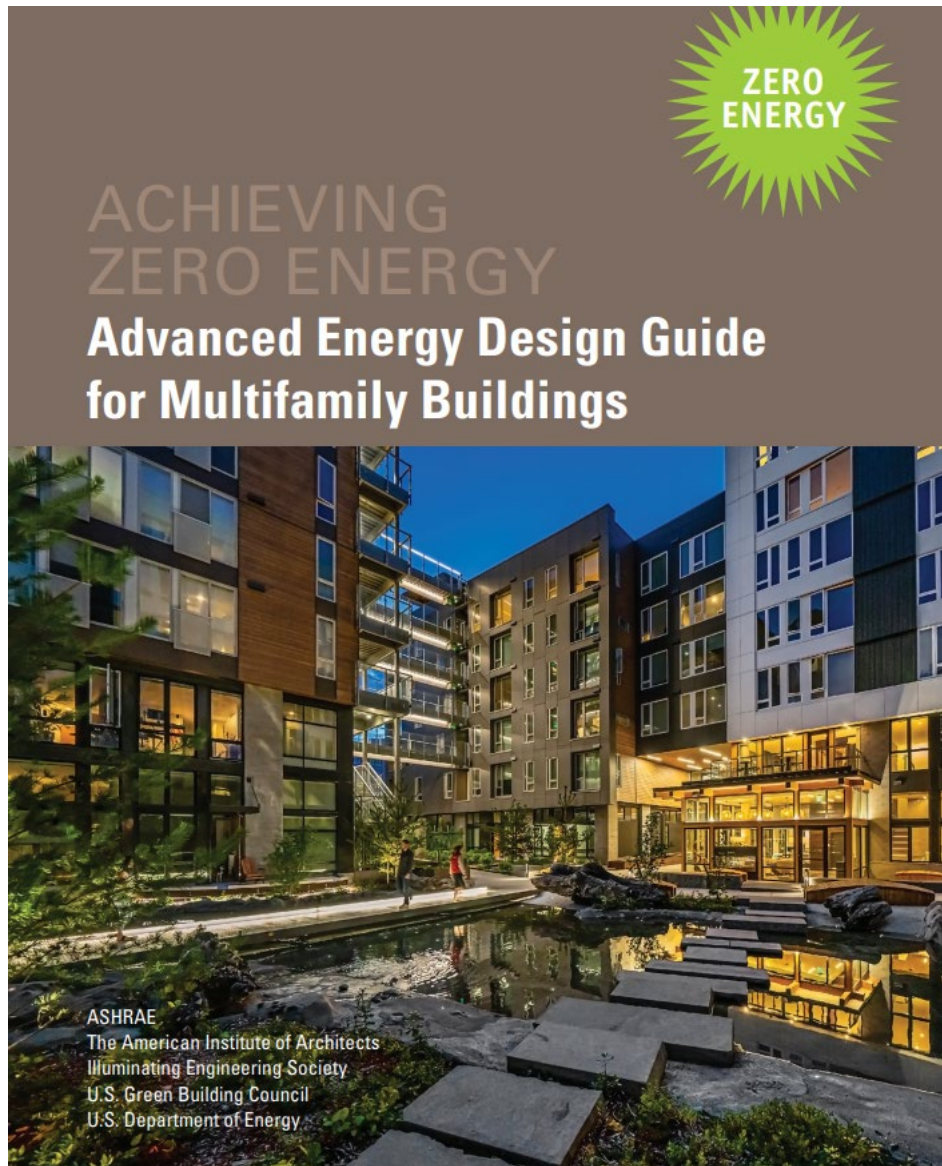
Resources to help improve your program and reach energy efficiency targets:

- [Handbooks](#) - explain *why* and *how* to implement specific stages of a program.
- [Quick Answers](#) - provide answers and resources for common questions.
- [Proven Practices](#) posts - include lessons learned, examples, and helpful tips from successful programs.
- [Technology Solutions](#) **NEW!** - present resources on advanced technologies, **HVAC & Heat Pump Water Heaters**, including installation guidance, marketing strategies, & potential savings.



<https://rpssc.energy.gov>

Zero Energy Advanced Energy Design Guide for Multifamily Buildings



This Guide demonstrates that zero energy multifamily buildings are attainable and provides design teams with strategies for achieving energy savings goals that are financially feasible, operationally workable, and readily achievable.

The Guide offers direction for designing and constructing zero energy multifamily buildings in all climate zones through recommendations, strategies, and solution packages.

Now available for free download through ASHRAE
<https://www.ashrae.org/technical-resources/aedgs/zero-energy-aedg-free-download>



Making the Most of Low-e Storm Windows and Smart HVAC Tools

Wednesday, June 22, 2022 | 2:00 PM - 3:00 PM ET

REGISTER TODAY >

The U.S Department of Energy has two technology campaigns that could revolutionize weatherization work: the Storm Window and Insulating Panel (SWIP) Campaign and the Smart Tools for Efficient HVAC Performance (STEP) Campaign. Modern, high-efficiency storms are a cost-effective alternative to full window replacement at a fraction of the cost – providing air sealing, thermal insulation, noise reduction, and other benefits. Smart diagnostic tools identify energy-wasting faults in residential HVAC systems by pairing a suite of digital gauges with a smart phone. Both the SWIP and STEP campaigns are national platforms to share information and recognize successes among campaign partners. In this webinar, Pacific Northwest National Laboratory staff will describe how to implement these technologies in your work.

DOE Health + Home Performance Infographic

- **WHO**: Res EE programs, partners (contractors+)
- **WHAT**: Visual aid, trusted source
- **WHERE**: IRL or digitally
- **WHY**: Most do not get link btw home, health & efficiency
- **CONTRACTORS**: Find qualified networks

Do You Have a “Healthy Home?”

A qualified contractor can help you assess and address indoor air quality, improve your comfort, and cut your utility bills.

Answers to a few basic questions can help you get started:

- **How old are your heating and cooling systems?**

Ensuring your system is updated and well maintained can save money and improve health and comfort.

- **Is your home insulated?**

Properly installed insulation in your walls and attic, at levels recommended for your home's climate, will cut bills, and improve comfort.

- **Have you ever noticed mold in your home?**

Visible mold likely means humidity levels need to be better addressed or indicates a potential leak or water damage.

- **Are your windows caulked and doors weather-stripped?**

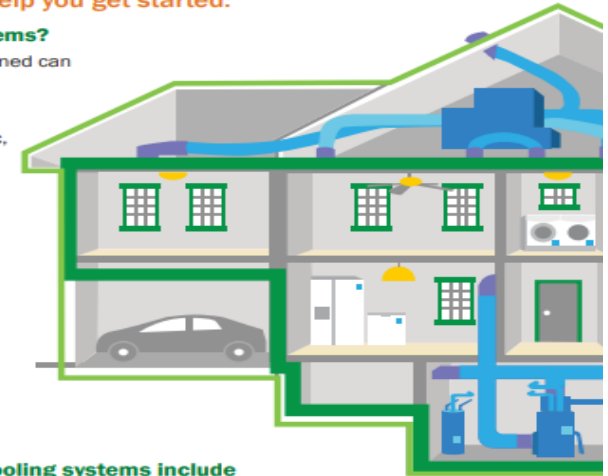
These relatively simple fixes reduce air leaks and help maintain indoor temperature levels.

- **Are your appliances ENERGY STAR® rated?**

ENERGY STAR appliances are energy efficient and help you save money.

- **Do you know if your home's heating and cooling systems include proper levels of ventilation?**

Effective ventilation is important for both health and safety. Ventilation, along with frequently replaced air filters, can help make sure your home is bringing in fresh air as needed, and keep out pollutants when outdoor air quality is poor due to ozone, fire, or other factors.



GET started

FIND A QUALIFIED CONTRACTOR:

- Home Performance with ENERGY STAR® at [ENERGYSTAR.gov/HomePerformance](https://energystar.gov/HomePerformance)
- Building Performance Institute at bpi.org/locator-tool

U.S. DEPARTMENT OF
ENERGY | Office of ENERGY EFFICIENCY
& RENEWABLE ENERGY
BUILDING TECHNOLOGIES OFFICE

DOE/EE-2349



Thank You!

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Please send any follow-up questions
or future call topic ideas to:
bbresidentialnetwork@ee.doe.gov